

July 2000
FACT SHEET
BIA - Teec Nos Pos Boarding School
NPDES Permit No. AZ0110094

I. Introduction

The U.S. Department of the Interior was issued an NPDES Permit (AZ0110094) on August 06, 1992 for the Teec Nos Pos Boarding School wastewater treatment lagoons. The permit became effective August 14, 1992 and expired at midnight August 13, 1997. The U.S. Department of the Interior has reapplied to U.S. Region 9 for a permit reissuance. The facility is not considered a publicly-owned treatment works (POTW) because it is a federal facility.

Applicant address: U.S. Department of the Interior
Bureau of Indian Affairs
Shiprock Agency
P.O. Box 966
Shiprock, NM 87420

Facility contact: Roger Gorres
(520) 656-3252

II. Background

The BIA Teec Nos Pos Boarding School wastewater treatment lagoon is located in Teec Nos Pos, Apache County, Arizona, within the northern portion of the Navajo Nation. The BIA Teec Nos Pos Boarding School wastewater treatment lagoon is located half a mile east of the BIA School, Teec Nos Pos, Arizona. The Teec Nos Pos Boarding School facility serves a population of about 400 (students, personnel, and residents), receiving only domestic sewage, with a design flow of 0.08 million gallons per day (MGD). The treatment facility is a five-cell total retention evaporation pond. The wastewater from the collection system flows by gravity directly into the lagoon. Effluent will be discharged intermittently from Cell #1 through a 12-inch pipe into the Todastoni Wash, a tributary to the San Juan River, a tributary to the Colorado River (Outfall No. 001). The cell is currently used for settling and natural die-off of fecal coliform bacteria.

EPA has determined that there are no endangered species of concern in the discharge area so no requirements specific to the protection of endangered species are in the proposed permit.

III. Navajo Nation Water Quality Standards

Pursuant to the Water Quality Act of 1987 and the "EPA Policy for the Administration of Environmental Programs on Indian Reservations" (November 8, 1987), EPA will work directly with Indian Tribal governments on a one to one basis. This conforms with the Federal Indian Policy of January 24, 1983. The Navajo Nation has received Treatment as a State (TAS) for Section 106 of the Clean Water Act (CWA) but has not applied for TAS under Section 303. Section 106 grant money is used to develop water quality standards and use designations, which must be approved under Section 303 by EPA Region 9. On September 7, 1999, the Navajo Nation completed and adopted water quality standards for the nation's waters. These water quality standards along with a TAS application under Section 303 was submitted to EPA in November 1999. In the interim until the Navajo Nation's water quality standards are approved by EPA, those water quality standards will be used on a best professional judgement basis for purposes of developing water quality based effluent limitations.

IV. Basis of Proposed Permit Requirements

The proposed discharge limitations are based on:

A. Secondary Treatment Regulations contained in 40 CFR Part 133, Sections 133.101 through 133.105, promulgated September 20, 1984, and most recently amended on January 27, 1989. EPA used these regulations and its best professional judgement (BPJ) to develop limits for this facility.

B. Navajo Nation Water Quality Standards, September 7, 1999.

V. Designated Uses of the Receiving Water

The designated uses of the receiving water (Todastoni Wash, a nonperennial tributary drainage to the San Juan River), as defined by the Navajo Nation's water quality standards, are secondary human contact, ephemeral warm water habitat, and livestock and wildlife watering (p. 20).

VI. Determination of Effluent Limitations, Monitoring, and Reporting Requirements

A. Flow Rates

Under the proposed permit, there is no flow

limit, but the flow must be monitored and reported. The monitoring frequency is once/month, as in the previous permit. Based on review of discharge monitoring reports for 1999, the facility has reported no discharge.

B. Five-Day Biochemical Oxygen Demand (BOD₅)

Under the proposed permit, the discharge shall not exceed a weekly average of 45 mg/l and a monthly average of 30 mg/l BOD₅, and shall achieve no less than a monthly average rate of 85% removal. These limits are required under 40 CFR Section 133.102(a). The limits are designated as 30-day and 7-day averages since the facility operates similarly to a POTW [40 CFR 122.45 (d)].

Under 40 CFR Section 122.45(f), mass limits are required for BOD₅. Based upon the 0.08 MGD flow, the mass limits for BOD₅ are based on the following calculations:

Monthly average

$$\frac{0.08 \text{ MG}}{\text{day}} \times \frac{30 \text{ mg}}{\text{l}} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 9.0 \text{ kg/day}$$

Weekly average

$$\frac{0.08 \text{ MG}}{\text{day}} \times \frac{45 \text{ mg}}{\text{l}} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 13.5 \text{ kg/day}$$

The daily maximum will also be monitored and reported. The monitoring frequency is once per discharge. The limits are the same as those in the previous permit.

C. Total Suspended Solids (TSS)

Under the proposed permit, the discharge shall not exceed a weekly average of 45 mg/l and monthly average of 30 mg/l TSS, and shall achieve no less than a

monthly average rate of 85% removal. These limitations are consistent with 40 CFR 133.101(f), 133.102(b) and 133.103(c). Mass limit requirements in accordance with 40 CFR 122.45(f) have also been set in the proposed permit. Mass loadings shall not exceed a 7-day average of 13.5 kg/day and a 30-day average of 9.0 kg/day. The monitoring frequency is once per discharge. These limits are the same as those in the previous permit.

D. Fecal Coliform

In the proposed permit, the monthly logarithmic mean of fecal bacteria shall not exceed 200/100 ml, as a geometric average of samples collected during the calendar month, and 400/100 ml as a single sample maximum. These limits are based on the Navajo Nation water quality standards for secondary human contact (p. 24.) The monitoring frequency is once per discharge.

E. Total Residual Chlorine (TRC)

The permit requires chlorination of the effluent before discharge. For the intermittent discharge, no single sample shall exceed 11 ug/l for TRC. This limit is based on the Navajo Nation aquatic, wildlife and livestock numeric water quality standards for ephemeral warm water habitat (Table 206B.2, p. 28.) This requirement is more stringent than the previous permit. The monitoring frequency is once per discharge.

F. Total Dissolved Solids (TDS)

In the proposed permit, there is a monitoring requirement for TDS. Both the intake water supply and the plant effluent will be monitored. The monitoring frequency is once per discharge. The regulations at 40 CFR 122.44(i) allow requirements for monitoring as determined to be necessary.

G. Ammonia (as un-ionized NH₃)

The proposed permit requires monitoring for ammonia. The monitoring frequency is once per discharge. If analytical results

for the first four quarters reveal ammonia levels are below EPA's National Water Quality Criteria for ammonia, the monitoring frequency will decrease to once/year. The regulations at 40 CFR 122.44(i) allow requirements for monitoring as determined to be necessary.

H. pH

The proposed permit requires that effluent pH not fall below 6.5 or above 9.0 standard pH units, consistent with the Navajo Nation water quality standards. The monitoring frequency is once per discharge.

I. Reporting

The proposed permit requires discharge data obtained during the previous three months to be summarized and reported monthly. If there is no discharge for the month, indicate "Zero Discharge". These reports are due January 28, April 28, July 28, and October 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the Navajo Nation.

J. General Standards

The proposed permit sets general standards that are narrative water quality standards contained in the Navajo Nation Water Quality Standards, Section 203. These general standards are set forth in Section B. General Discharge Specifications of the permit.

VII. Permit Reopener

At this time, there is no reasonable potential to establish any other water quality-based limits. Should any monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursions above water quality criteria, the permit may be reopened for the imposition of water quality-based limits and/or whole effluent toxicity limits. This permit may be modified, in accordance with the requirements set forth at 40 CFR 122.44 and 124.14, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new Tribal water quality standards.

VIII. Biosolids Requirements

The permittee shall submit a report 60 days prior to disposal of biosolids. The report shall discuss the quantity of biosolids

produced, the treatment applied to biosolids including process parameters, disposal methods, and, if land applied, analyses for Arsenic, Cadmium, Chromium, Copper, Lead, Molybdenum, Nickel, Zinc, and Selenium expressed in mg/kg dry biosolids. The permittee shall comply with all standards for biosolids use and disposal of Section 405(d) of the CWA, and 40 CFR Parts 257, 258 and 503.

IX. Written Comments

Persons who wish to comment upon, object to the proposed action, or request a public hearing pursuant to 40 CFR Section 124.11 should submit their comments and requests in writing within thirty (30) days from the date of the Public Notice, either in person or by mail to:

U.S. Environmental Protection Agency, Region IX
CWA Standards and Permits Office (WTR-5)
Attn: Linh Tran
75 Hawthorne Street
San Francisco, CA 94105
Telephone: (415) 744-1901

X. Information and Copying

The Administrative Record, which contains the draft NPDES permit, the fact sheet, comments received, and other relevant documents, is available for review and may be obtained by calling or writing to the above address.

All comments or objections received within thirty (30) days from the date of the Public Notice, will be retained and considered in the formulation of the final determination regarding the permit issuance.

XI. Public Hearing

When public interest warrants, the Regional Administrator shall hold a public hearing and such notice of hearing shall be issued by public notice at least thirty (30) days prior to the hearing date. A request for a public hearing must be in writing and must also state the nature of the issue proposed to be raised in the hearing.